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ABSTRACT

One method of identifying important areas and books within a field is through citation counts--noting the number of times a work is referred to in the literature. These counts can be supplemented with citation networks, in which links between articles are formed by such methods as direct citation and cocitation. Citation counts and networks were used to analyze the references in three volumes of "Journalism Quarterly" (1978, 1979, 1980) in order to determine the most frequently cited sources in the journal, to identify classic works, and to determine whether there was an active front in the field of journalism research. Of 2,821 sources cited, only 43 were cited as many as five times, and no source was cited more than 11 times. The most frequently cited journal was "Journalism Quarterly" itself. Citation networks indicated that Klapper's "The Effects of Mass Communication"; Lazerfeld's, Berelson's, and Gaudet's "The People's Choice"; and Berelson's, Lazerfeld's, and McPhee's "Voting" were highly cited by other sources, and thus might be good candidates for classics of the field. The findings suggested that journalism research might not have as active a research front as fields in the physical sciences. (FL)

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Citation Networks as Indicators Of Journalism Research Activity

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Citation Networks as Indicators of Journalism Research Activity

Identification of areas of major research activity within a field can be important for several reasons. It can help define the field. It can pinpoint the boundary between what we know and what we do not know. It can help locate the "research front" and "hot topics."

One method of identifying areas of important work is through citation counts. It can be argued that a highly cited article is being heavily used by other authors, and thus is an important article. Much work using this method has been done by the Institute for Scientific Information, which often publishes lists of the most frequently cited papers and authors in science in general and in specific fields. Garfield, who was the founder of the Institute, has shown a correlation between being cited frequently and winning the Nobel Prize.[1] Citation counts also correlate with "virtually every refined measure of quality."[2]

Citation counts alone can be misleading, however, and researchers in the citation area recommend that they be supplemented with analysis of citation networks.[3] This allows the identification of clusters of papers, and strengthens the argument that an important area has been identified. Citation networks are formed by linking articles on the basis of direct citation (one article citing another), bibliographic coupling (a linkage based on the number of references that two articles have in common) or co-citation (a linkage based on the frequency with which two articles are cited together by later articles).[4] Garfield states that scientists often report that citation-based cluster analysis gives them a better overview of their own fields than they themselves may have had.[5] Price

has shown that citation networks can be used to identify the "research front," and Meadows and O'Connor have suggested that the best way to identify a "new growth area" in a scientific field is by looking for a high degree of connectedness in a citation network.[7] Citation networks can also be used to identify "classic papers."[8]

This paper uses citation counts and citation networks to analyze the references in three volumes of Journalism Quarterly. It attempts to answer the following questions:

1. What are the most frequently cited sources in Journalism Quarterly for the years 1978-80?

2. Do the most frequently cited sources cite each other? Can they be put into citation networks? Do the sources in the citation networks group into clusters that can be used to identify major areas of journalism research?

3. How are citations in Journalism Quarterly distributed according to frequency?

4. How are citations distributed according to age?

5. How are sources distributed according to type of publication--journal article, book, book chapter, convention paper, thesis, dissertation, and so forth?

6. Which journals are the most frequently cited in Journalism Quarterly?

7. Is it possible to identify "classic" works in the area of journalism research?

8. Is there an active "research front" in the field of journalism research?

Related Studies

Previous attempts to identify the significant areas of journalism research have been undertaken by Schramm[9] and Weaver and Gray.[10] Writing in 1956, Schramm identified seven areas: history and biography, the press in society, readership, content analysis, readability, the communicator and the process and effects of

mass communication. In 1979, Weaver and Gray identified nine active areas of research on journalism and mass communication (from the 1950s on): effects of violent television, impact of news coverage on riots, effects of pornography, effects of television advertising on children, uses and effects of media in political campaigns, characteristics of working journalists, newspaper readership and use, characteristics of newspaper managers and coorientation.

Cole and Bowers, in a study of factors related to journalism faculty research productivity, asked their sample of researchers and administrators what they thought were the most important areas in current mass communication research and what areas should be concentrated on in the future.[11] The answers showed great diversity, with only coorientation, theory-building and agenda-setting mentioned by as many as three different respondents.

Several authors have reported citation studies of Journalism Quarterly, but none of them looked at citation networks. Tannenbaum and Greenberg, and, later, Webb and Salancik, found a shift in sources cited in Journalism Quarterly from trade publications to behavioral science journals.[12] Kent and Rush studied the use of citations in articles in Journalism Quarterly dealing with international communication, and found the field similar to other social sciences in age of works cited and other variables.[13]

Two other citation studies in the communication field have dealt with citation networks, but the networks have been made up of journals and not individual articles. Parker, Paisley and Garrett found clusters of journals formed by citation analysis tended to group according to traditional disciplines -- psychology, sociology, educational psychology and marketing.[14] Communication journals such as Journalism Quarterly and Public Opinion Quarterly were much more likely to cite journals in these other fields than they were to be cited by them. Reeves and Borgman, working fifteen years later, found that the information scatter

problem described by Parker, Paisley and Garrett had lessened, partly due to the creation of some new communication journals.[15] Communication journals were citing other communication journals more and journals from the other social sciences less. Reeves and Borgman found a pattern in which nine communication journals fell into two groups -- speech-oriented and mass communication-oriented -- with the journal Human Communication Research serving as a bridge between the two groups.

The Method

Citations were collected from three volumes of Journalism Quarterly -- 1978, 1979 and 1980. Each unique source within the same article was recorded as a citation. That is, if a source was referred to again in the same article with an Ibid or an op. cit., this was not counted as a second citation.

References to the following kinds of materials were excluded on the assumption that they would not be heavily cited or be likely to cite other sources: newspaper articles, popular magazine articles, law cases, speeches, letters and minor government reports.

The following information was recorded for each citation: author name for the cited source, year of publication for the cited source, title of the cited work, type of publication for the cited work (journal article, book, book chapter or article in book, convention paper, thesis, dissertation, other), journal title if cited work was a journal article, year of Journalism Quarterly for citing article, volume number for citing article, page number at which citing article began, author name for citing article, and whether the citing article was a regular article or a "Research in Brief" contribution.

A BASIC computer program was written to group the citations according to cited author and to determine the frequency with which each source was cited.

The 43 most cited sources (which were those cited five or more times) were used to construct various types of citation networks. The first step was to examine

each of the 43 and see which of the other 42 it cited. This information was recorded in a citation matrix with sources listed in the order of the frequency with which they were cited (see Figure 1). The citation matrix was then used to construct citation networks of two types -- direct citation and co-citation -- and of varying sizes (depending on the number of sources included).

A direct citation network is constructed by grouping the sources roughly according to years and then representing each instance of direct citation with an arrow from the citing document to the cited document. Direct citation networks are useful for showing historical development of a field.

A co-citation network is constructed by drawing a line between two documents if they are cited together by a number of other documents. The strength of co-citation can vary, depending on the number of sources which cite both documents, and this varying strength can be represented by varying the number of lines linking the two documents. Co-citation can define an area of activity more specifically than direct citation. For instance, if a content analysis book and a book on television were heavily co-cited, this would suggest that content analysis of television was an active area. Co-citation can also reflect changes in linkages over time, which direct citation cannot do.

Results

The three volumes of Journalism Quarterly contained 224 full-length articles and 90 contributions under "Research in Brief." The articles had 2,786 references, for an average of 12.4 per article. The "Research in Brief" selections had 660 references, for an average of 7.3 per article. The total number of citations examined was 3,446.

The frequencies with which various sources were cited are summarized in Table 1. It is apparent that only a few sources were cited with high frequency.

Sources that were cited one, two or three times make up 97.67 per cent of the citations. Sources cited 4-11 times make up the other 2.33 per cent of the citations. Only 43 references were cited as many as five times each. No source was cited more than 11 times.

The distribution of citations by age (Table 2) shows that 60 per cent of the citations were to sources published within the last ten years. This compares with the following percentages of citations within the last ten years for several other fields: political science, 47.6; economics, 45; sociology, 57-80; chemistry, 71.2; physics, 88.2; and philology (linguistics), 34.9.[16] In the hard sciences, most of the cited literature is less than ten years old, while in the humanistic disciplines, such as political science and linguistics, most of the cited literature is more than ten years old. Journalism and sociology fall somewhere in between.

An examination of the "half-life" of literature in various fields indicates that journalism research cites an older body of literature than most of the physical and natural sciences, but not all of them. The half-life of a body of literature is defined as the length of time into the past which corresponds to half the citations being younger and half older. The citations in Journalism Quarterly showed a half-life of 6.5 years for 1978, 8.0 years for 1979 and 7.7 years for 1980, with an average of 7.4. This can be compared with these half-lives from the physical and natural sciences: chemical engineering, 4.8 years; mechanical engineering, 5.2; metallurgical engineering, 3.9; mathematics, 10.5; physics, 4.6; chemistry, 8.1; geology, 11.8; physiology, 7.2; botany, 10.0.[17]

The most frequently cited kind of publication in Journalism Quarterly is the journal article (see Table 3). This is contrary to the situation in sociology, where several authors have found that books are cited more than serials.[18]

Perhaps not too surprisingly, the most frequently cited journal in Journalism Quarterly is Journalism Quarterly itself (see Table 4). This fits the pattern of

heavy self-citation found in Journalism Quarterly and a number of other communication journals by Reeves and Borgman.[19] The four next most heavily-cited journals are all closely related to the journalism and mass communication field.

The 43 most frequently cited sources in Journalism Quarterly, along with their citation frequencies, are listed in Table 5. Although books are not the predominant source in the complete set of Journalism Quarterly citations, they are in the most frequently cited 43 sources. In fact, 10 out of the top 11 sources are books. This predominance of books in the highly cited sources agrees with a finding in the social sciences in general. Small found that of the 26 documents cited most frequently in the social sciences from 1972 to 1974, all but three were books.[20]

The top 43 sources include four that can be classified as works of methodology -- Nie and his associates' SPSS manual, Siegel's book on non-parametric statistics, and the books on content analysis by Budd, Thorp and Donohew and by Holsti. This is a different picture from the natural sciences, where Garfield has reported that methodology dominates the 50 most cited journal articles.[21]

Several different citation networks were constructed to look at the relationships between the highly cited sources. The 11 most frequently cited sources (those cited seven or more times) are shown in a network based on direct citation in Figure 2. The SPSS manual drops out of the network, since it is neither cited by nor cites these other heavily cited sources.

The figure shows that there is a pattern of cumulative growth taking place among the highly cited papers, with more recent sources building on earlier sources. The network contains many of the same sources that have been prominently mentioned in various attempts to describe the history of the mass communication research field. These attempts include Kraus and Davis's discussions of mass communication and political socialization and of mass communication and the electoral process,[22] Becker,

McCombs and McLeod's discussion of the development of political cognitions[23] (itself a highly cited source in this study), and Severin and Tankard's discussion of the effects of mass communication.[24]

Of the ten sources in the network, four deal with television, two deal with methodology or statistics, two deal with the press in general (both newspapers and broadcast media) and two deal with mass media theory in general. This suggests that journalism researchers are concentrating more on television or the mass media in general than they are on newspapers -- at least in the active area marked by high frequency citation and clustering.

A second direct citation network was constructed using the 25 most frequently cited sources (see Figure 3). The 11 most frequently cited sources (which were included in Figure 2) are indicated in this figure by shading at the tops of their circles. The most highly cited sources are Klapper's The Effects of Mass Communication, which is cited eight times; Berelson, Lazarsfeld and McPhee's Voting, which is cited five times; Cohen's The Press and Foreign Policy, which is cited five times; and Blumler and McQuail's Television in Politics, which is cited five times. These four sources are highly cited sources which are frequently cited by other highly cited sources -- perhaps a good definition of a "classic." The long period of influence of Klapper's book is particularly evident.

A co-citation network based on the 25 most frequently cited sources appears in Figure 4. The co-citation threshold was set at two, so that a source was not included in the network unless it was co-cited at least twice with another of the 25. The number of lines between the two sources indicates the number of times they were co-cited by other sources in the top 25. Only ten of the 25 sources were co-cited with others of the 25 with sufficient strength to be included in the network. Klapper's book occupies a central position, being co-cited with

seven of the other nine sources. There is a core of six publications that are heavily co-cited together: Klapper's book on effects, Cohen's book on the press and foreign policy, Berelson and associates' election study, Schramm and associates' study of television and children, McCombs and Shaw's article dealing with agenda setting, and Blumler and McQuail's book on television and politics. This core seems to be involved with television, political elections, and the effects of mass communication. More peripheral areas that are not so tightly tied into the core are represented by Epstein's book on television news, Breed's article on social control in the newsroom, Janowitz's book on the community press and Samuelson and associates' article on time spent using the various media.

A co-citation network based on the 43 most frequently cited sources appears in Figure 5. The co-citation threshold was again set at two, and only 16 of the 43 were co-cited with one of the other 42 with sufficient strength to be included in the network. Klapper's book again occupies a central position, being co-cited with 12 of the other 15 sources in the network. The core has been expanded by the addition of Lazarsfeld and associates' earlier voting study and Lasswell's article on the structure and function of communication. The other four additions are in the periphery. They are Siegel's book on non-parametric statistics, Osgood's book on the semantic differential, Jacobson's article on the believability of the various media and Stephenson's book on play theory.

Another method of displaying citation patterns is by means of a matrix in which both citing and cited sources are ordered by age. This approach has been used by Price in an analysis of the research topic of "N-rays," a spurious phenomenon investigated around 1904.[25]

The 43 most frequently cited sources in Journalism Quarterly are arranged in this kind of matrix in Figure 6. Price suggests that classics in a field are represented by dense columns in the matrix. These are documents being heavily

cited over a long period of time. The three densest columns are for Lazarsfeld, Berelson and Gaudet (with 10 citations), Klapper (with 10 citations), and Berelson, Lazarsfeld and McPhee (with 8 citations).

"Review papers" are indicated by dense rows in the matrix. The three densest rows are for Blumler and Katz (citing 11 sources), Becker, McCombs and McLeod (citing 9 sources) and Patterson and McClure (citing 9 sources).

An area that Price calls the "research front" is represented by dots near the diagonal separating the filled half of the matrix from the empty half. Dots in that position represent sources that are citing very recent sources. Compared with Price's matrix for N-rays, this matrix does not show a lot of citations at the research front. Rather, citations tend to be spread uniformly throughout the matrix.

Discussion

These citation counts and networks may provide an indication of "where the action is" in journalism research. They suggest that the active areas of journalism research are television and politics, sociological studies of journalists, agenda setting and (an old area that continues to attract interest) the effects of mass communication.

Noticeably absent from the networks and the list of most frequently cited documents are sources from the areas of attitude change, the theory of cognitive dissonance, readability, diffusion of innovation and the four theories of the press.

Garfield has argued that sources that are high in both frequency of citation and immediacy of citation can be regarded as particularly significant pieces of work.[26] Two documents that are high on these criteria are Johnstone and associates' book on characteristics of working journalists, which was published in 1976 and cited 11 times in Journalism Quarterly during the period 1978-80, and Patterson

and McClure's study of television and elections, which was published in 1976 and cited 10 times.

The three strongest candidates for classics -- Klapper's book on the effects of mass communication and the two voting studies of Lazarsfeld, Berelson and Gaudet and Berelson, Lazarsfeld and McPhee -- all represent work by the Bureau of Applied Social Research at Columbia University. Lazarsfeld was the director of this bureau, and Klapper was one of his prize students. The emergence of these three as classics supports Gitlin's argument that the work of Lazarsfeld and his students came to represent the "dominant paradigm" in communication research.[27]

Klapper's book occupies a key position in all four of the citation networks. In Figures 2 and 3, it has the most direct citations from other sources. And in Figures 4 and 5, it is co-cited with more sources than any other source. Part of the value of Klapper's book may be that it is one of the few works in the field attempting to synthesize research and build theory. Rogers has pointed out the need for this kind of work in his recent presidential address to the International Communication Association.[28] Klapper's book may also be heavily cited because it has generality -- the question of effects is pertinent to many different problems in mass communication.

A source can also be heavily cited because it is wrong.[29] This could be the case with Klapper's book, which presented a "limited effects" model of mass communication that was later challenged by numerous researchers. This does not necessarily diminish the importance of Klapper's work, however. If many researchers took the trouble to disagree with it, it is likely that it was presenting an important and plausible thesis.

The indication that there is not a definite "research front" in Figure 6 and the fact that old sources tend to be cited heavily may indicate a problem with

journalism research. This apparently is not a field in which a hypothesis is clearly rejected and replaced with another so that older literature no longer needs to be cited. Journalism research may not be characterized by Platt's "strong inference," a process in which hypotheses are systematically excluded.[30]

One limitation of this study is that it dealt only with citations from Journalism Quarterly. Some of the findings could be artifacts of that choice. For instance, the lack of a sharp research front in Figure 6 could be due to the rather long publication lag of Journalism Quarterly. Actually, this does not seem likely, however, since only one-third of the references in Figure 6 are themselves Journalism Quarterly articles.

Nevertheless, it would be interesting to replicate the study using the journal Communication Research or one year's set of Theory and Methodology Division papers to see if the same set of key publications is identified.

The study is also limited in time. It is like a snapshot, and future snapshots may (and should) show a changing picture.

TABLE 1

References Cited in Journalism Quarterly by Frequency of Citation

Times Cited	Number Of Items	Percentage
11	2	0.08
10	2	0.07
9	3	0.11
8	0	0
7	4	0.14
6	14	0.5
5	18	0.64
4	23	0.82
3	60	2.13
2	208	7.38
1	2487	88.16
	2821	100.03

TABLE 2

Distribution of Citations by Age

Age	Frequency	Percentage
Before 1900	32	0.9
1900-1909	13	0.4
1910-1919	11	0.3
1920-1929	20	0.6
1930-1939	55	1.6
1940-1949	114	3.3
1950-1959	262	7.7
1960-1969	863	25.0
1970-1979	2048	59.4
1980	3	0.1
No Date	25	0.7
	3446	100.0

TABLE 3

Types of Sources Cited in Journalism Quarterly, 1978-1980

Source	Frequency	Percentage
Journal Article	1303	46.17
Book	880	31.18
Book Chapter or Article in Book	263	9.32
Convention Paper	91	3.23
Thesis	41	1.45
Dissertation	77	2.73
Others	167	5.92
	2822	100.0

TABLE 4

The 12 Most Cited Journals in Journalism Quarterly, 1978-1980

Title	Times Cited
Journalism Quarterly	416
Public Opinion Quarterly	85
Journal of Broadcasting	69
Journal of Communication	41
Columbia Journalism Review	30
American Sociological Review	19
Gazette	18
American Journal of Sociology	16
Broadcasting	16
Journal of Marketing Research	16
American Political Science Review	15
Communication Research	15

TABLE 5

The 43 Most Cited References in Journalism Quarterly, 1978-1980

	Times Cited	
1.	11	Nie, Norman H. et al., SPSS: Statistical Package for the Social Sciences (New York: McGraw-Hill, 1975).
2.	11	Johnstone, John W.C., Edward J. Slawski, and William W. Bowman, The News People: A Sociological Portrait of American Journalists and Their Work (Urbana: University of Illinois Press, 1976).
3.	10	Bower, Robert T., Television and the Public (New York: Holt, Rinehart, and Winston, 1973).
4.	10	Patterson, Thomas E. and Robert D. McClure, The Unseeing Eye: The Myth of Television Power in National Elections (New York: G. P. Putnam's Sons, 1976).
5.	9	Budd, Richard W., Robert K. Thorp, and Lewis Donohew, Content Analysis of Communications (New York: MacMillan, 1967).
6.	9	Cohen, Bernard C., The Press and Foreign Policy (Princeton, N.J.: Princeton University Press, 1965).
7.	9	Klapper, Joseph T., The Effects of Mass Communication (New York: The Free Press, 1960).
8.	7	Blumler, Jay G. and Denis McQuail, Television in Politics: Its Uses and Influence (Chicago: University of Chicago Press, 1969).

TABLE 5 - continued

9. 7 McCombs, Maxwell and D.L. Shaw, "The Agenda-Setting Function of Mass Media," Public Opinion Quarterly, 36:176-187 (1972).

10. 7 Schramm, Wilbur, Jack Lyle, and E.B. Parker, Television in the Lives of Our Children (Stanford: Stanford University Press, 1961).

11. 7 Siegel, Sidney, Non-Parametric Statistics for the Behavioral Sciences (New York: McGraw-Hill, 1956).

12. 6 Becker, Lee B., M. McCombs, and Jack M. McLeod, "The Development of Political Cognitions," in Steven Chaffee, ed., Political Communications: Issues and Strategies for Research (Beverly Hills, Calif.: Sage Publications, 1975).

13. 6 Berelson, Bernard, Paul F. Lazarsfeld, and William McPhee, Voting: A Study of Opinion Formation in a Presidential Campaign (Chicago: University of Chicago Press, 1954).

14. 6 Blumler, Jay G. and Elihu Katz, eds., The Uses of Mass Communication: Current Perspectives on Gratifications Research (Beverly Hills: Sage Publications, 1974).

15. 6 Breed, Warren, "Social Control in Newsroom: A Functional Analysis," Social Forces, 33:326-335 (May 1955).

16. 6 Carter, Richard F. and Bradley S. Greenberg, "Newspapers or Television: Which Do You Believe?" Journalism Quarterly, 42:29-34 (1965).

17. 6 Epstein, Edward J., News From Nowhere (New York: Random House, 1973).

18. 6 Gerbner, George and Larry P. Gross, "Living with Television: The Violence Profile," Journal of Communication, 26:173-199 (1976).

19. 6 Jacobson, Harvey K., "Mass Media Believability: A Study of Receiver Judgments," Journalism Quarterly, 46:20-28 (1969).

20. 6 Janowitz, Morris, The Community Press in An Urban Setting (Chicago: University of Chicago Press, 1965).

TABLE 5 - continued

21. 6 Kline, F. Gerald, "Media Time Budgeting as a Function of Demographics and Life Style," Journalism Quarterly, 48:211-221 (1971).

22. 6 Samuelson, Merrill, Richard F. Carter, and Lee Ruggels, "Education, Available Time, and Use of Mass Media," Journalism Quarterly, 40:491-496; 617 (1963).

23. 6 Schramm, Wilbur and David White, "Age, Education, and Economic Status: Factors in Newspaper Reading," Journalism Quarterly, 26:150-158 (1949).

24. 6 Stempel, Guido H. III, "The Prestige Press Meets the Third Party Challenge," Journalism Quarterly, 46:699-706 (1969).

25. 6 Wirth, Michael O. and James A. Wollert, "Public Interest Program Performance of Multimedia Owned TV Stations," Journalism Quarterly, 53:223-230 (1976).

26. 5 Bogart, Leo, "Negro and White Media Exposure: New Evidence," Journalism Quarterly, 49:15-21 (1972).

27. 5 Dunn, Delmer D., Public Officials and the Press (Reading, Mass.: Addison-Wesley Press, 1969).

28. 5 Emery, Edwin, The Press and America (Englewood Cliffs, N.J.: Prentice-Hall, 1972).

29. 5 Greenberg, Bradley S., "Media Use and Believability: Some Multiple Correlates," Journalism Quarterly, 43:665-670 (1966).

30. 5 Greenberg, Bradley S., "Gratifications of Television Viewing and Their Correlates for British Children," in Jay G. Blumler and Elihu Katz, eds., The Uses of Mass Communications: Current Perspectives on Gratifications Research (Beverly Hills: Sage Publications, 1974).

31. 5 Hofstetter, C. Richard, Bias in the News: Network Coverage of the 1972 Election Campaign (Columbus: Ohio State University Press, 1976).

TABLE 5 - continued

32. 5 Holsti, Ole R., Content Analysis for the Social Sciences and Humanities (Reading, Mass.: Addison-Wesley, 1969).

33. 5 Katz, Elihu, Jay G. Blumler, and Michael Gurevitch, "Utilization of Mass Media by the Individuals," in Jay G. Blumler and Elihu Katz, eds., The Uses of Mass Communications: Current Perspectives on Gratifications Research (Beverly Hills: Sage Publications, 1974).

34. 5 Lasswell, Harold, "The Structure and Function of Communication in Society," in Lyman Bryson, ed., The Communication of Ideas (New York: Institute for Religious and Social Studies, 1948), reprinted in Wilbur Schramm, ed., Mass Communications (Urbana: University of Illinois Press, 1960), pp. 117-130.

35. 5 Lazarsfeld, Paul, Bernard Berelson and Hazel Gaudet, The People's Choice, (New York: Columbia University Press, 1944).

36. 5 Osgood, Charles E., G.J. Suci, and Percy H. Tannenbaum, The Measurement of Meaning (Urbana: University of Illinois Press, 1957).

37. 5 Penrose, Jeanne, et al., "The Newspaper Nonreader 10 Years Later: A Partial Replication of Westley-Severin," Journalism Quarterly, 51:631-638 (Winter 1974).

38. 5 Robinson, John P., "The Press as King-Maker: What Surveys from the Last Five Campaigns Show," Journalism Quarterly, 51:587-594 (1974).

39. 5 Roper, Burns W., Changing Public Attitudes Toward Television and Other Mass Media (New York: Television Information Office, 1977).

40. 5 Stempel, Guido H. III, "Effects on Performance of a Cross-Media Monopoly," Journalism Monographs, No. 29 (June 1973).

41. 5 Stephenson, William, The Play Theory of Mass Communication (Chicago: University of Chicago Press, 1967).

TABLE 5 - continued

42. 5 Westley, Bruce H. and Werner J. Severin, "A Profile of the Daily Newspaper Non-Reader," Journalism Quarterly, 41:45-50 (1964).

43. 5 Westley, Bruce H. and Werner J. Severin, "Some Correlates of Media Credibility," Journalism Quarterly, 41:325-335 (1964).

FIGURE 1

Citation Matrix for the 43 Most Cited Sources

(With Sources in Order of Frequency of Citation)

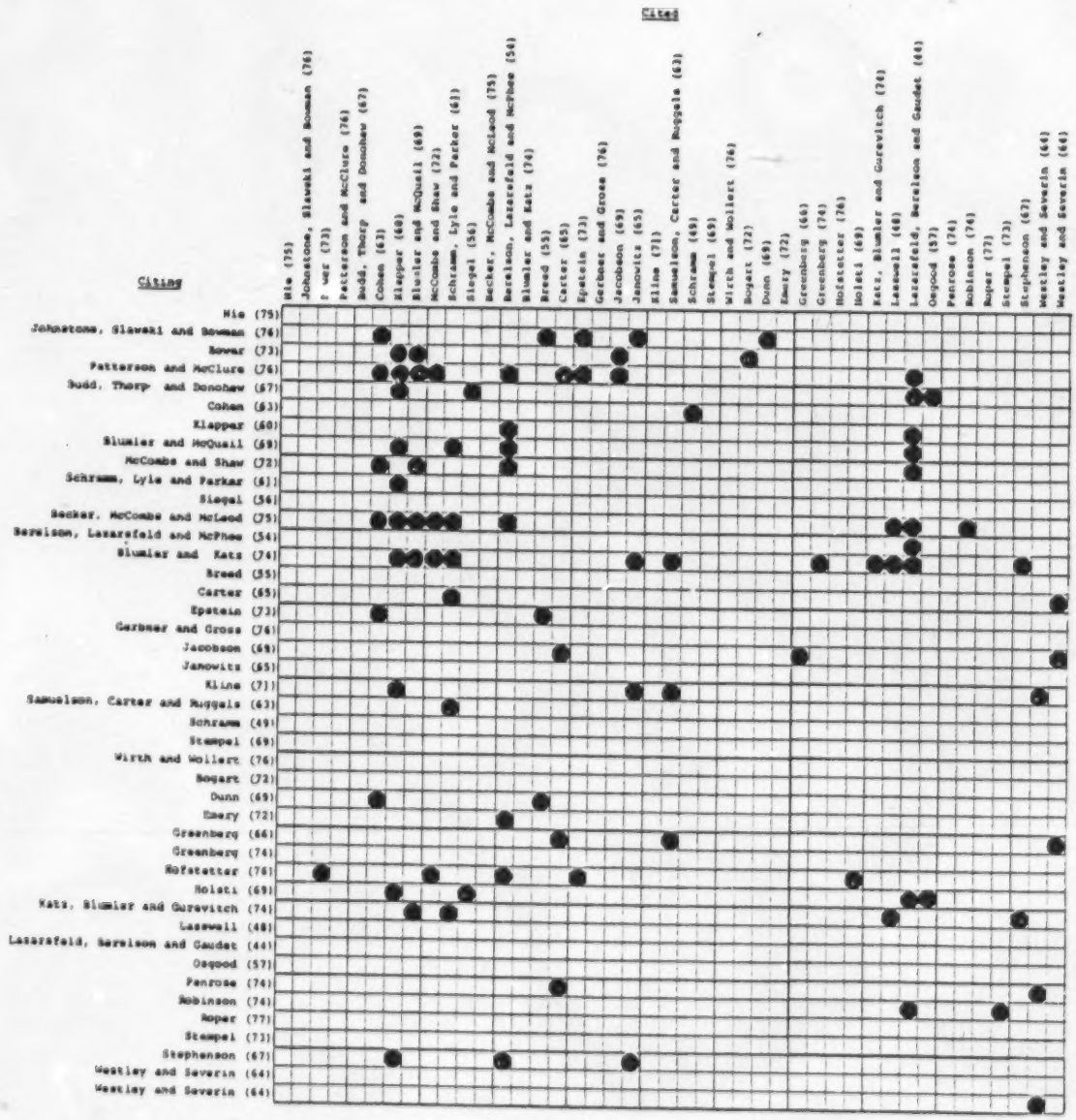


FIGURE 2

Direct Citation Network for the 11 Most Cited Sources

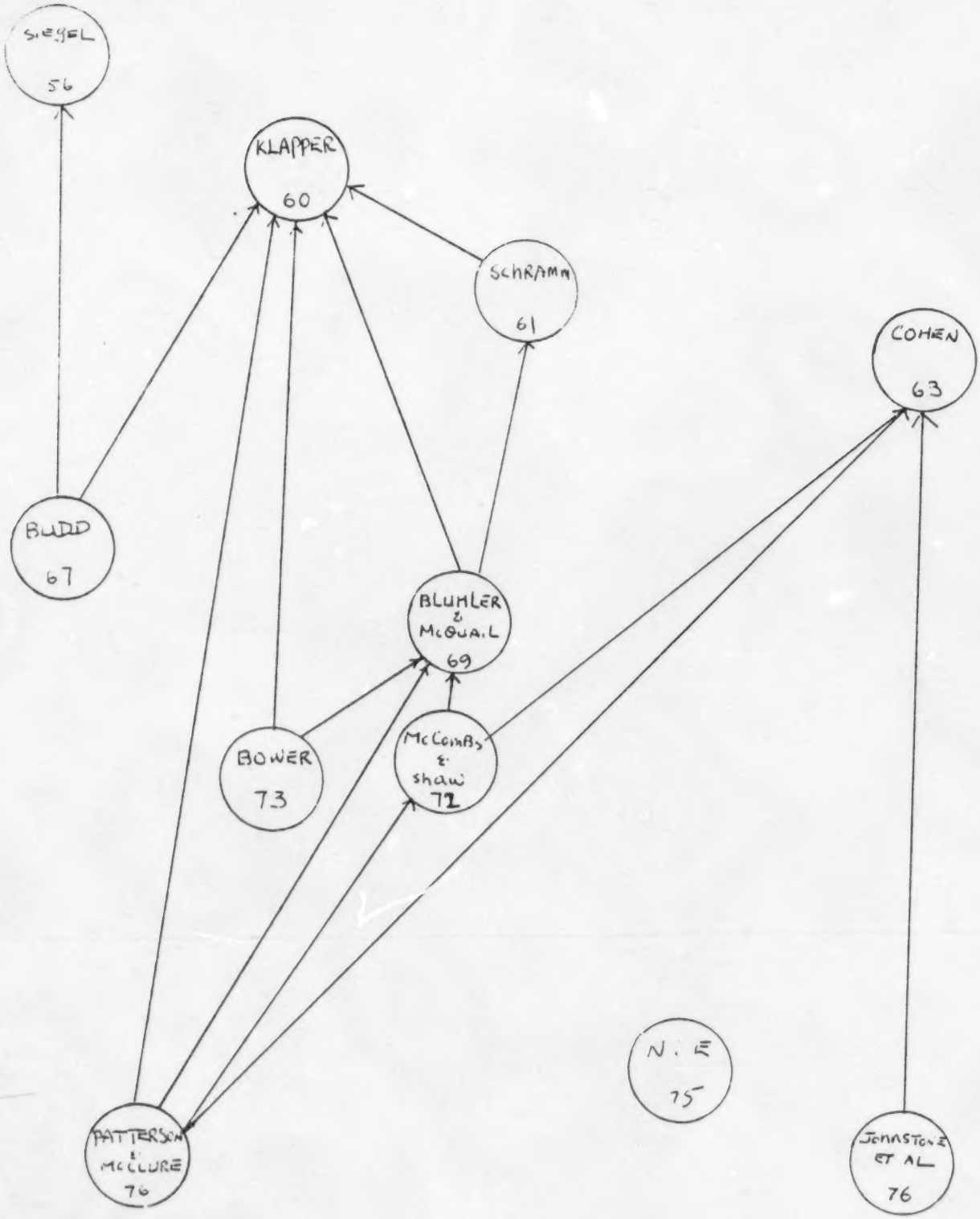


FIGURE 3

Direct Citation Network for the 25 Most Cited Sources

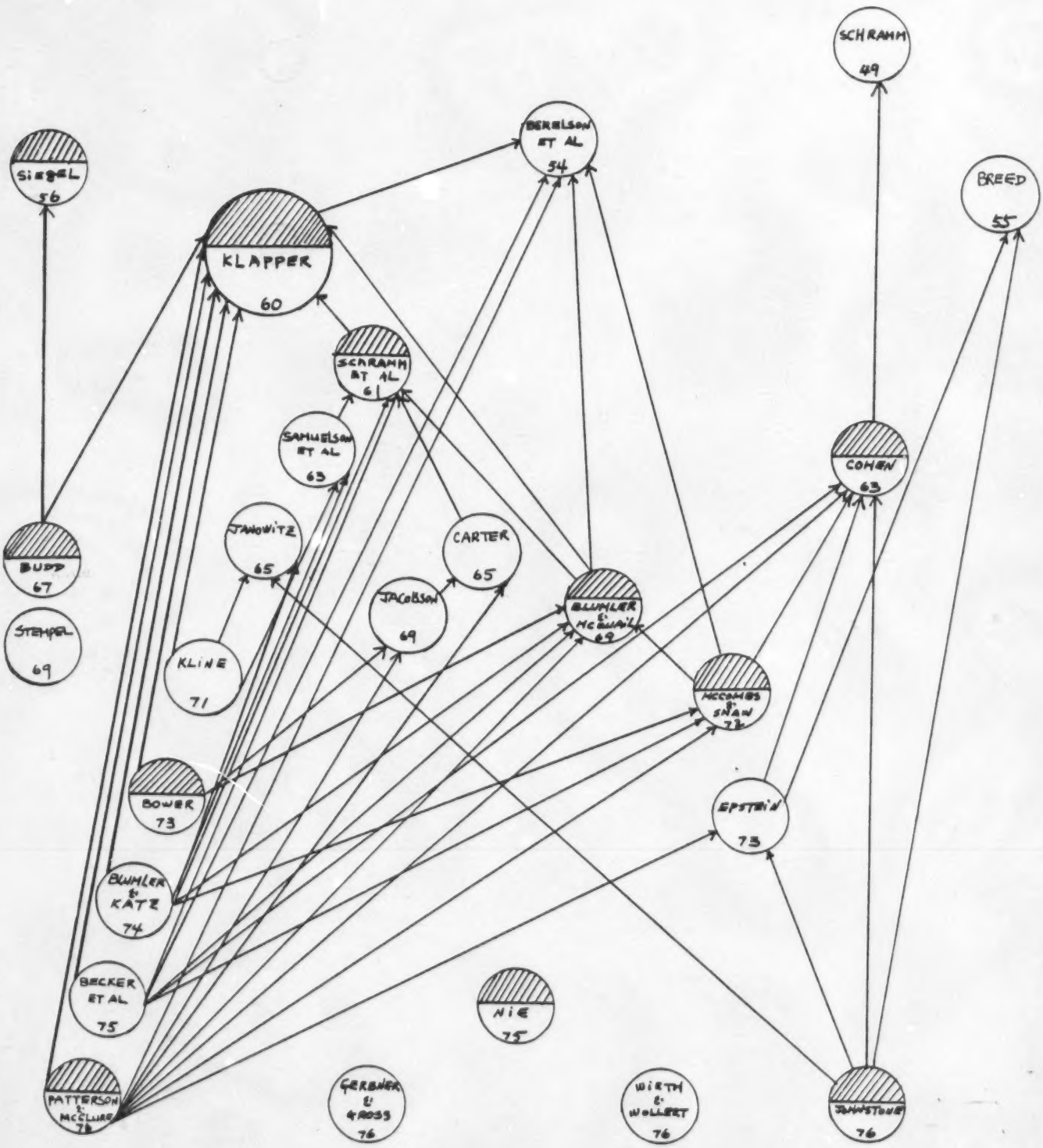
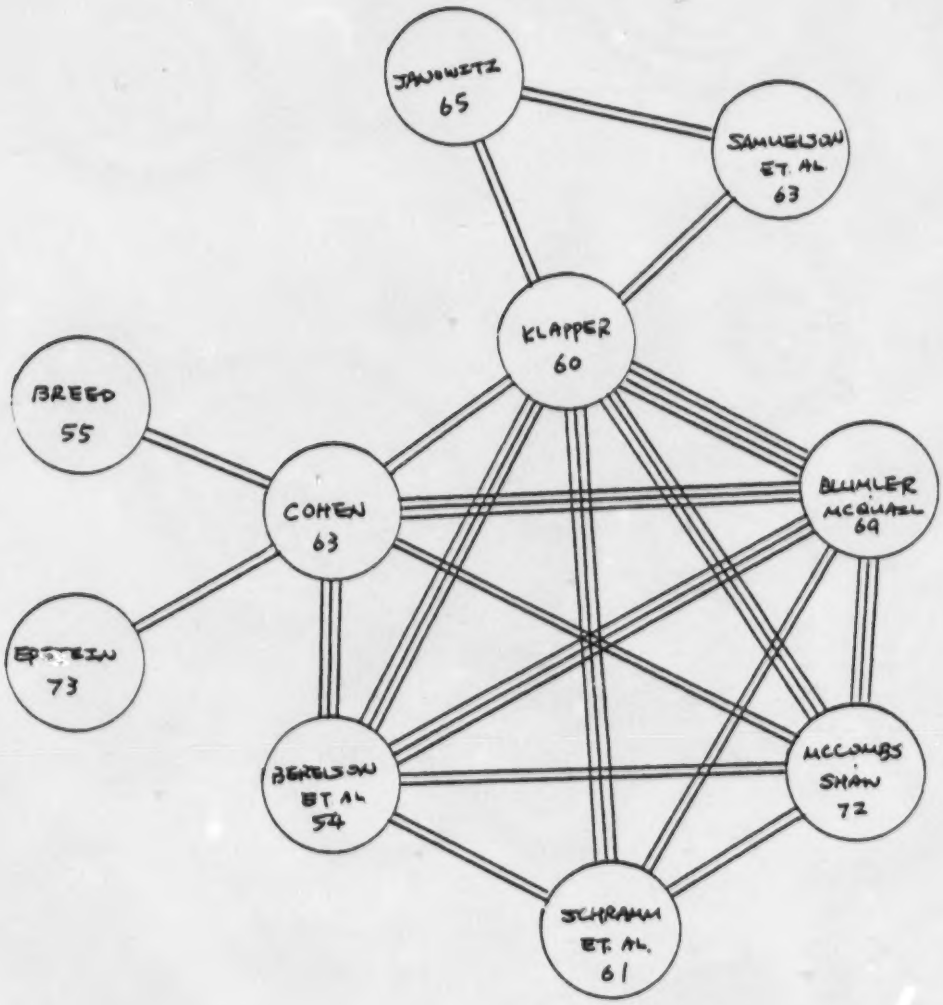


FIGURE 4

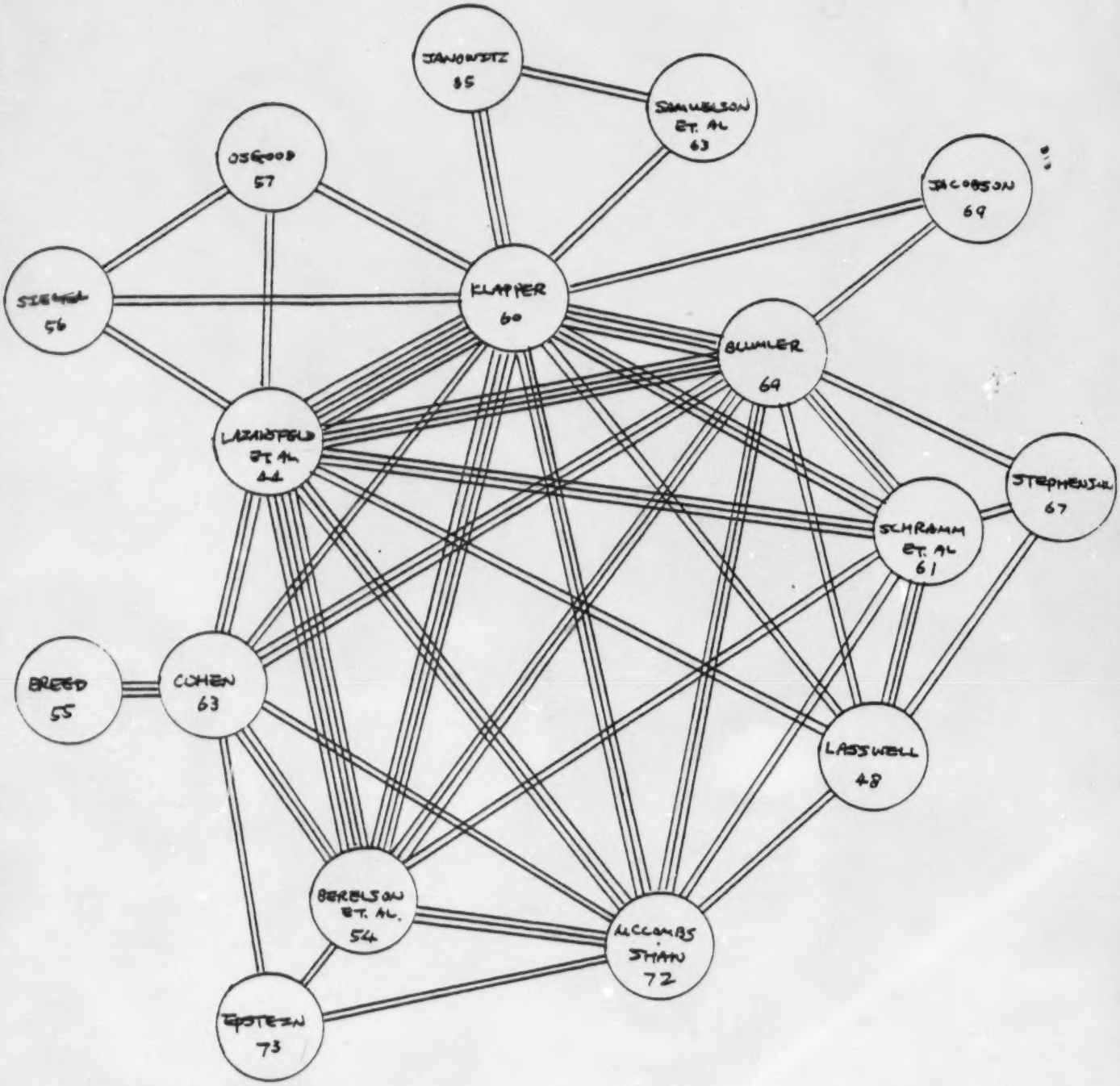
Co-Citation Network for the 25 Most Cited Sources[a]



a The number of lines between the two sources indicates the number of times they were co-cited by other sources in the top 25. Only 10 sources appear in the network because only 10 of the 25 were co-cited with at least one other source two or more times.

FIGURE 5

Co-Citation Network for the 43 Most Cited Sources[a]

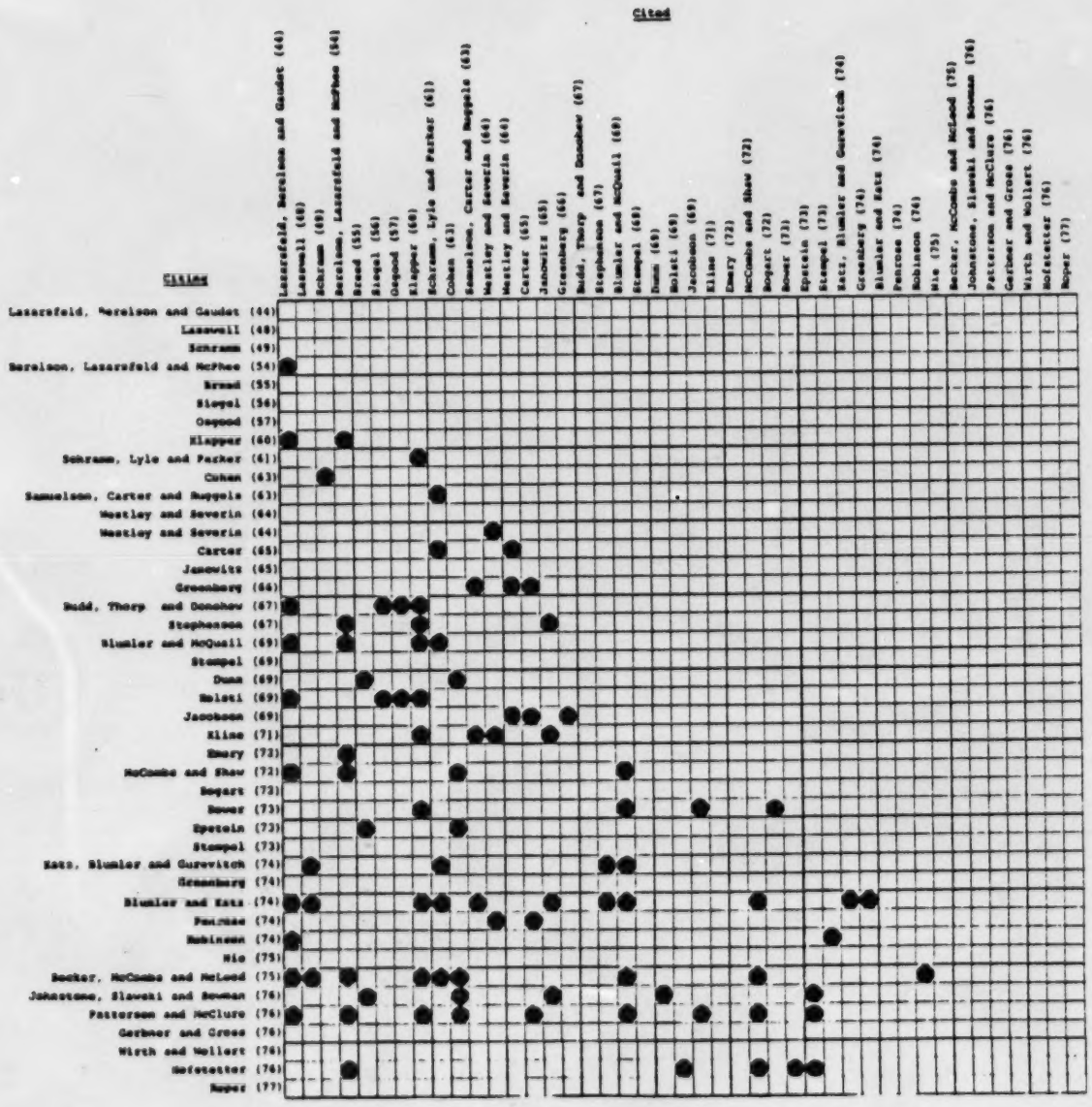


a The number of lines between the two sources indicates the number of times they were co-cited by other sources in the top 43. Only 16 sources appear in the network because only 16 of the 43 were co-cited with at least one other source two or more times.

FIGURE 6

Citation Matrix for the 43 Most Cited Sources

(With Sources in Chronological Order)



Footnotes

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